Abstract

Iris recognition is one of commonly employed biometric for personal recognition. In this paper, Single Value Decomposition (SVD), Automatic Feature Extraction (AFE), Principal Component Analysis (PCA) and Independent Component Analysis (ICA) are used to extract the iris feature from a pattern named IrisPattern based on the iris image. The IrisPatterns are classified using a Feedforward Backpropagation Neural Network (BPNN) and Support Vector Machines (SVM) with Radial Basis Function (RBF) kernel with different dimensions and a comparative study is carried out. From the experimental result, it is observed that ICA is the most effective feature extraction method for both BPNN and SVM with Gaussian RBF for the consider datats. Futher, SVM with Gaussian RBF can classify faster than BPNN.

References

- Daugman J. 2002. Recognizing Persons by Their Iris Patterns. The Computer Laboratory, University of Cambridge, UK
A Comparative Study of Feature Extraction and Classification Methods for Iris Recognition


**Index Terms**

Computer Science

Pattern Recognition

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**Keywords**

Iris Recognition. image Segmentation. SVM. Classification.